

## **CLAIMS:**

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent is:

1. A method for normalizing a profile collected for an executing application to account for one or more actions applied to the executing application after the profile was collected, the method comprising:

(a) predicting an impact of applying the one or more actions to the executing application by utilizing the profile and the one or more actions; and

(b) adjusting the profile to form a normalized profile according to the predicted impact.

2. A system for normalizing a profile collected for an executing application to account for one or more actions applied to the executing application after the profile was collected, the system comprising:

a predictor for predicting an impact of applying the one or more actions to the executing application by utilizing the profile and the one or more actions; and

an adjuster for adjusting the profile to form a normalized profile according to the predicted impact.

3. A method for adjusting a profile collected for an executing application to account for one or more actions applied to the executing application to improve detection of phase shifts in the executing application after the profile was collected, the method comprising:

(a) collecting a first profile for the executing application;

(b) predicting an impact of applying the one or more actions to the executing application by utilizing the first profile and the one or more actions;

(c) adjusting the profile to form a normalized profile according to the predicted impact;

(d) applying the one or more actions to the executing application;

(e) collecting a second profile for the executing application; and

(f) detecting a phase shift in the executing application by utilizing the normalized profile and the second profile.

4. A system for adjusting a profile collected for an executing application to account for one or more actions applied to the executing application to improve detection of phase shifts in the executing application after the profile was collected, the system comprising:

a profiling agent for collecting a first profile and a second profile for the executing application;

a predictor for predicting an impact of applying the one or more actions to the executing application by utilizing the first profile and the one or more actions;

an adjuster for adjusting the first profile to form a normalized profile according to the predicted impact;

an applicator for applying the one or more actions to the executing application;

and

a phase shift detector for detecting a phase shift in the executing application by utilizing the normalized profile and the second profile.

5. A method for adjusting a profile collected for an executing application to account for one or more actions applied to the executing application to determine whether there is improvement in the execution of the executing application after the profile was collected, the method comprising:

- (a) collecting a first profile for the executing application;
- (b) selecting and applying one or more actions to the executing application;
- (c) predicting an impact of applying the selected one or more actions to the executing application by utilizing the first collected profile and the one or more actions;
- (d) adjusting the first profile to form a normalized profile according to the predicted impact;
- (e) collecting a second profile for the executing application;
- (f) evaluating the second profile against the normalized profile to determine whether there is expected improvement in the execution of the executing application; and
- (g) applying one or more actions to undo the one or more actions applied to the executing application if there is no expected improvement in the executing application.

6. A system for adjusting a profile collected for an executing application to account for one or more actions applied to the executing application to determine whether there is improvement in the execution of the executing application after the profile was collected, the system comprising:

a profiling agent for collecting a first profile and a second profile for the executing application;

a selector for selecting one or more actions to apply to the executing application;

a predictor for predicting an impact of applying the selected one or more actions to the executing application by utilizing the first collected profile and the one or more actions;

an adjuster for adjusting the first collected profile to form a normalized profile according to the predicted impact;

action evaluator for evaluating the second profile against the normalized profile to determine whether there is expected improvement in the execution of the executing application; and

applicator for applying the selected one or more actions and one or more actions that undo the applied one or more actions if there is no expected improvement in the executing application.

7. A method for adjusting a profile collected for an executing application to account for one or more actions applied to the executing application to improve execution of the executing application after the profile was collected, the method comprising:

(a) applying a first selected action to the executing application based on the collected profile;

(b) predicting an impact of applying the first selected action to the executing application by utilizing the collected profile and the first selected action;

(c) adjusting the collected profile to form a first normalized profile according to the predicted impact;

(d) applying a second selected action to the executing application based on the first normalized profile or a subsequently normalized profile;

(e) predicting an impact of applying the second selected action to the executing application by utilizing the first normalized profile and the second selected action;

(f) adjusting the first normalized profile to form a second normalized profile according to the predicted impact; and

(g) repeating steps (d) – (f) for the second normalized profile and every subsequently normalized profile and selected action.

8. A system for adjusting a profile collected for an executing application to account for one or more actions applied to the executing application to improve execution of the executing application after the profile was collected, the system comprising:

a predictor for predicting an impact of applying a first selected action to the executing application by utilizing the collected profile and the first selected action;

an adjuster for adjusting the collected profile to form a first normalized profile according to the predicted impact; and

an applicator for applying the first selected action to the executing application based on the collected profile, applying a second selected action to the executing application based on the first normalized profile and repeatedly applying each selected action from each subsequently normalized profile to the executing application.